

ABSTRACT

A metal-to-metal antifuse according to the present invention is compatible with a Cu dual damascene process and is formed over a lower Cu metal layer planarized with the top surface of a lower insulating layer. A lower barrier layer is disposed over the lower Cu metal layer. An antifuse material layer is disposed over the lower barrier layer. An upper barrier layer is disposed over the antifuse material layer. An upper insulating layer is disposed over the upper barrier layer. An upper Cu metal layer is planarized with the top surface of the upper insulating layer and extends therethrough to make electrical contact with the upper barrier layer.